

**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

1           1. (Currently Amended) A carbon nanotube device comprising:  
2                 a substrate support structure including an aperture extending  
3                 from a front surface to a back surface of the substrate structure;  
4                 at least one pair of electrically conducting contact pads disposed  
5                 on a selected one of the front and back substrate surfaces and separated by the  
6                 aperture;  
7                 a carbon nanotube catalyst region of a solidified vapor deposit  
8                 disposed on top of each of the contact pads and exposed at the selected  
9                 substrate surface; and  
10                 at least one carbon nanotube extending across the aperture and  
11                 accessible through the aperture from both the front surface and the back  
12                 surface of the substrate support structure, each end of the carbon nanotube  
13                 located on top of an exposed catalyst region at the selected substrate surface.

1           2. (Original) The device of claim 1 wherein the carbon nanotube  
2                 comprises a single-walled carbon nanotube.

1           3. (Original) The device of claim 1 wherein the carbon nanotube  
2                 comprises a multi-walled carbon nanotube.

1           4. (Original) The device of claim 1 wherein the carbon nanotube  
2                 comprises a semiconducting carbon nanotube.

1           5. (Original)The device of claim 1 wherein the carbon nanotube  
2 comprises a metallic carbon nanotube.

1           6. (Original)The device of claim 1 wherein the at least one carbon  
2 nanotube comprises a plurality of carbon nanotubes.

7. (Canceled).

1           8. (Currently Amended) The device of claim 7-1 wherein the substrate  
2 ~~support structure~~ comprises a semiconducting substrate.

1           9. (Currently Amended) The device of claim 1 wherein the substrate  
2 ~~support structure~~ comprises a membrane.

1           10. (Original)       The device of claim 9 wherein the membrane  
2 comprises a silicon nitride membrane.

1           11. (Original)       The device of claim 9 wherein the membrane  
2 comprises a silicon dioxide membrane.

1           12. (Currently Amended) The device of claim 1 wherein the substrate  
2 ~~support structure~~ is aligned between a source of electrons and an electron  
3 detector for nanometer-scale transmission electron microscopy of the carbon  
4 nanotube.

1           13. (Canceled).

1           14. (Canceled).

1           15. (Currently Amended) The device of claim 1\_3\_ wherein the at least  
2 one pair of electrically conducting contact pads comprises a plurality of pairs of  
3 contact pads disposed at locations around the aperture.

Claims 16-30 (Canceled)

1           31. (New) The device of claim 1 wherein the catalyst region is less  
2 than about 2 nm in thickness.

1           32. (New) The device of claim 1 wherein the catalyst region covers a  
2 portion of a contact pad.

1           33. (New) The device of claim 1 wherein the catalyst region covers  
2 substantially an entire contact pad.